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The National Breast Screening Programme: the first 5,000 women screened in Northern Ireland

Ann J O'Doherty, J G Crothers, C W Majury

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SUMMARY

The National Breast Screening Programme is an ongoing public health programme. Women between 50 and 64 years are being invited to attend for screening at three yearly intervals. The results of the first 5,000 women screened in the Eastern Health and Social Services Board's unit are presented. The breast cancer detection rate was 7·8 per thousand women screened. The malignant to benign biopsy rate was greater than 1:1.

INTRODUCTION

The working party chaired by Professor Sir Patrick Forrest was appointed in 1985 to report to the Ministers of Health of England and Wales, Scotland and Northern Ireland on the feasibility of breast screening. This party published its report in 1986 and recommended the implementation of a National Breast Screening Programme.[1] It suggested that all women between the ages of 50 and 64 years should be invited for a single oblique mammogram at three yearly intervals. The government accepted this recommendation and agreed to fund the programme. It was anticipated that this should be fully operational by April 1991. In Northern Ireland the implementation of the National Breast Screening Programme has been devolved to Board level. The Eastern Board programme consists of a static screening unit in the Board Headquarters in Belfast and a mobile screening unit will be used to provide screening for women in Lisburn, Newtownards, Downpatrick, Newcastle, Bangor and Portaferry. All assessment clinics take place in the static unit.

SUBJECTS AND METHODS

All women between the ages of 50 and 64 years were identified from the Northern Ireland Central Services Agency general practice lists and invited to attend for screening. A prior notification list was compiled with the names and addresses

Northern Ireland Screening Programmes, Breast Screening Unit, Eastern Health and Social Services Board, 12 – 22 Linenhall Street, Belfast BT2 8BS.

Ann J O'Doherty, MRCPI, FRCR, Clinical Director of the Breast Screening Centre / Consultant Radiologist, Royal Victoria Hospital, Belfast BT12 6BA.

J G Crothers, MB, FRCR, Consultant Radiologist, Royal Victoria Hospital, Belfast BT12 6BA.

C W Majury, MB, FRCR, Consultant Radiologist, Ulster Hospital, Dundonald, Belfast BT16 0RH.

of the eligible women in each practice and this was forwarded to the general practitioner to ensure that the addresses were correct and that there was no contraindication to inviting the women for screening. Each woman then received a letter inviting her to attend for screening at an appointed time. The initial invitation letter stated that a second attendance may sometimes be required. It was hoped that, by stating in the initial letter that screening may require two visits, some of the anxiety generated by recall for assessment might be alleviated. Two views were routinely performed, a medio-lateral oblique and a super-inferior view. All examinations were performed on either a Siemens Mammomat 2S or a Mammomat 2U. All films were reported independently by two radiologists. Women with suspicious lesions were recalled for assessment. Most women recalled were reassured following further evaluation by means of clinical examination, further radiography and/or ultrasound evaluation. Those women requiring surgical biopsy had hospital admission arranged prior to leaving the assessment clinic. Women who did not accept the original invitation to attend for screening received a second invitation. Women who failed to attend following a second invitation will be re-invited during the next round of screening in three years' time.

RESULTS

The Table outlines the results of the first 5,000 women screened. The initial response rate following invitation was 66% which is slightly less than the 70% acceptance rate predicted by the Forrest Report; the recall rate of 5·2% is almost half that predicted. All the women screened in this report were seen in the static screening unit. The radiographers checked all films before the women left the department, so there were no recalls for technical reasons. All women attending for assessment had clinical examination, some had further radiography and some had ultrasound examination of the breasts.

TABLE

Outcome of mammographic screening

Women invited	7,250
Women attended	5,000
Recalled for assessment	260
Requiring further radiography	184
Ultrasound examination	164
Fine needle aspiration	42
Surgical biopsy	75

Forty-two women had fine needle aspiration performed for cytological examination. Sixteen of these aspirations were reported as consistent with malignant disease, ten were diagnostic of benign change and the remaining sixteen did not yield sufficient material for cytological diagnosis.

Of the seventy-five women who were referred for surgical biopsy, thirty-nine had malignant disease, and thirty-six had benign breast change. This is a considerably more acceptable ratio than the 3:1 benign to malignant ratio predicted by the

Forrest Report. The cancer detection rate of 7·8 per 1,000 exceeds the 5 per 1,000 required by the Pritchard Report on Quality Assurance in Mammography.[6] The lower benign biopsy rate has not resulted in a lower cancer detection rate.

DISCUSSION

The Forrest Report recommended that a single oblique mammogram should be used for screening. There have been various reports in the literature questioning the adequacy of single view mammography,[2-4] and advocating the use of two views to decrease the number of women recalled for assessment. A survey of the United Kingdom screening units that were operational in November 1989 revealed that 35% of centres were routinely employing two views during the prevalence round of the National Breast Screening Programme.[5] As it was predicted that the cost of the extra view could be offset by fewer recalls,[5] it was decided that two views should be performed in the Eastern Board during the prevalence screening round. All films are independently reported by two radiologists in accordance with the Pritchard Report on quality assurance in mammography[6] and in accordance with 67% of the United Kingdom breast screening centres.[7] The initial results of the Eastern Board Screening Programme are encouraging and the recall rate, benign to malignant biopsy rate and cancer detection rate exceed the Forrest expectations.

However, the response rate to the initial invitations for screening is disappointing, but not entirely unexpected as the uptake for cervical screening in Northern Ireland is also lower than the United Kingdom average. The lower recall rate for assessment is welcome, not only in terms of the reduction in assessment work-load, but in terms of the high anxiety generated by recall for assessment. The cost of the extra view is more than offset by this lower recall rate and hence reduction in the number of assessment clinics is required.[5]

As further experience is gained in fine needle aspiration cytology, definitive pre-operative diagnosis will result in a reduction in the number of diagnostic biopsies and a single surgical procedure encompassing wide local excision and axillary lymph node sampling will become more common. Further efforts in the field of health education and health promotion are required to improve the number of women attending for screening. The recent report from Edinburgh suggests that unless 70% of women attend for screening, a 30% reduction in mortality from screening cannot be achieved.[8] In view of the number of cancers being detected in the women who attend for screening, a greater response rate would lead to the ultimate goal of a greater reduction in the mortality from breast cancer.

The success of the Eastern Board Breast Screening Programme has been dependent on a multi-disciplinary approach involving radiologists, surgeons, and pathologists. The authors wish to thank Dr M McAuley, breast clinician who carried out most of the clinical examinations, Mr W Odling-Smee, Mr A J Wilkinson, Mr R A J Spence and Mr H Logan who provided surgical support, Dr P Watt and Dr L Caughley who provided the cytological support for the programme, and the radiographic staff for their high level of commitment.

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